U.S. Environmental Protection Agency
Office of Research and Development

BOARD OF SCIENTIFIC COUNSELORS
LAND RESTORATION AND PRESERVATION SUBCOMMITTEE

Conference Call Summary
December 9, 2005
12:00 noon–2:30 p.m., EST

Welcome
Dr. Charlie Menzie, Chair, Land Restoration and Preservation Subcommittee

Dr. Menzie informed the Subcommittee members that they would be receiving an electronic version of the Land Restoration and Preservation Research Multi-Year Plan (MYP) and an overview of the MYP would be provided later in the conference call by Dr. Randy Wentsel and Dr. Leah Evison. He also stated that Ms. Heather Drumm had sent each Subcommittee member an electronic copy of the poster review assignments for the face-to-face meeting.

Dr. Menzie outlined the conference call agenda (included in Appendix A) and asked if there were any questions. Because there were no questions, he asked Ms. Drumm to address the administrative issues.

Administrative Procedures and Logistics for Face-to-Face Meeting
Ms. Heather Drumm, DFO, Land Restoration and Preservation Subcommittee, EPA

Ms. Drumm informed the Subcommittee members that she had sent each of them their airline itineraries and hotel confirmations via e-mail, and each member should review the information and contact her if there are problems. All necessary travel authorizations were received on December 8, 2005. She informed the Subcommittee members that the hotel reservations were guaranteed by the EPA support contractor's credit card, but each member needs to present their own credit cards upon arriving at the hotel. The Marriott Kingsgate Conference Center is directly across the street from the EPA laboratory. Upon arriving at the EPA laboratory, Subcommittee members must present identification at the security desk

The government *per diem* rate for Cincinnati, Ohio, is $78 per night for lodging and $54 per full day for general expenses. The *per diem* rate for travel days is $40.50 per day. Receipts for hotel and car rental are necessary for reimbursement, and Ms. Drumm informed the Subcommittee members that she would collect the travel claim forms and receipts on the last day of the face-to-face meeting. She asked if there were any questions regarding travel; there were none.

Ms. Drumm stated that there would be a social event on Tuesday, December 13, 2005, at 6:30 p.m. at the Mecklenberg Gardens Restaurant. A shuttle will be provided from the hotel.

Ms. Drumm reminded the Subcommittee members that a follow-up conference call will be scheduled to finalize the report from the face-to-face meeting and suggested the weeks of January 16, 2006, or January 23, 2006 for that call.

Dr. James Clark stated that Dr. Menzie would be presenting the findings of the Subcommittee at the Board of Scientific Counselors (BOSC) Executive Committee Meeting to be held February 13-14, 2006; Dr. Menzie may do this briefing via teleconference.

Ms. Drumm stated that there had been no request from the public to speak during the teleconference, but time was allotted at 1:50 p.m. for any member of the public who was present to speak.

Ms. Drumm turned the meeting back to Dr. Menzie, who introduced Dr. Wentsel, National Program Director for Land, who gave an overview of the Land Restoration and Preservation Research MYP.

Overview of the Land Restoration and Preservation Research Multi-Year Plan
Dr. Randy Wentsel, National Program Director for Land, EPA, and
Dr. Leah Evison, Office of Solid Waste and Emergency Response, EPA

Dr. Wentsel explained that there are two long-term goals (LTG) of the Land Restoration and Preservation Program, and each is divided into research themes; the posters at the face-to-face meeting will be presented according to the LTG research themes. During the poster session at the face-to-face meeting, principal investigators (PIs) will interact with Subcommittee members. A participant asked why the Small Business Innovation Research (SBIR) Program was not covered as a poster topic. Dr. Wentsel responded that SBIR falls under a different LTG and so is not included.

The purpose of the MYP is to enable EPA's Office of Research and Development (ORD) to chart the direction of its research program for the long term and prioritize research in response to shifting funds and priorities. The MYP is responsive and allows collaboration across ORD's laboratories and centers. In 2003, the BOSC Executive Committee and the EPA's Science Advisory Board (SAB) recommended that the Contaminated Sediments and the Resource Conservation and Recovery Act MYPs be combined into one MYP. In response to this, the Land Research Coordination Team (RCT) restructured the six original LTGs into two LTGs that were client-oriented and led to outcomes. Dr. Lynne Haber asked how often the MYP is updated and about the process for making course adjustments. Dr. Wentsel responded that the MYPs were revised approximately every 3 years, and shifts were made annually because the priorities of the program office change from year to year. A participant asked why, if the MYP is supposed to be for a 5- to 10-year period, it takes 6 years to develop it. Dr. Wentsel replied that three versions of the MYPs had been developed in the 6-year period, but the plans had been merged together in the last year. Dr. Eugene Keating asked if the difference between basic and applied research was distinguished in the MYP planning process. Dr. Wentsel replied that this particular MYP is categorized as applied research. Goal 4 contains core basic research, but Goals 1, 2, and 3 are problem-driven research areas. Dr. Leah Evison commented that ORD does recognize that, although it may see a need that is problem-driven, basic core research may be implemented first

so that applied research then can be carried out. Dr. Bob Dyer added that, although basic core research may be completed under a different MYP, the various laboratories involved could collaborate.

Dr. Evison explained that, to involve more regional scientists in MYP planning, the Office of Solid Waste and Emergency Response (OSWER) and ORD created five advisory workgroups comprised of regional project managers, technical support scientists, and Superfund scientists, including hazardous substance technical liaisons and ORD regional liaisons. The primary task for the advisory workgroups was to review the research needs and the current research program of their assigned topic (e.g., contaminated sediment; groundwater; engineering, containment, and soil treatment; site characterization and methods; and human health risk assessment) and prioritize them. Dr. Keating commented that although the description of the process was excellent, he did not see any metrics described. Dr. Evison responded that each workgroup devised its own process for prioritizing research needs. Dr. Bob Siegrist asked how many individuals from each geographic area were assigned to each workgroup. Dr. Evison responded that geographic diversity was considered when creating the workgroups and each contained four to five members from different regions, including one or two members from EPA Headquarters, two to three ORD liaisons, and one to two hazardous substance technical liaisons from within the regions. The advisory workgroups are standing groups; membership may change from year to year, but it is designed to be a group of experts that is ready to respond as the need arises. Dr. Keating asked how the metrics were standardized among the workgroups. Dr. Wentsel responded that groups were given some criteria so that there was less variability between groups. Dr. Evison added that she attended all workgroup meetings so that there was some continuity between the workgroups.

Dr. Wentsel explained that the advisory workgroups gave ORD, OSWER, and regional offices input on research needs and their priority. The Land RCT reviewed the input from the workgroups and filtered and selected appropriate research activities. As a result of the workgroups, approximately 20 to 25 regional personnel were involved in planning ORD's research priorities, and ORD also can communicate its research priorities back to the regions. Dr. Siegrist asked if there were feedback loops within the prioritization process. Dr. Wentsel responded that there were; after ORD implements its selection of research activities, ORD communicates with workgroups and regional management.

The Land Restoration and Preservation Research Program logic included a slow progression of outputs and short- and long-term outcomes. Outputs are transferred to the intended clients, and regional and state implementation of ORD outputs drive long-term outcomes. Mr. Tim Thompson asked what the difference is between outputs versus outcomes. Dr. Wentsel responded that examples of outputs are published technical reports or open literature publications. Short-term outcomes include tools or models being adopted, and long-term outcomes include regions and states adopting EPA guidance for cleanup. Long-term outcomes lead to implementation. A participant asked what the timeframe is for short- versus long-term outcomes. Dr. Wentsel responded that the timeframe for a short-term outcome is 2 years, whereas a long-term outcome may be 5 years.

Under the new MYP structure, LTG 1 focuses on remediation, with the research themes of sediments, groundwater, and multimedia, whereas LTG 2 focuses on prevention, with the research themes of resource conservation and materials management. The LTGs are client-oriented and address mitigation, management, and stewardship of contaminated sites. Determination of the nature and extent of contamination, determination of the risk of contamination, and selection of the best risk management option drive the research under LTG 1.

Under LTG 1, the contaminated sediments theme revolves around the challenge of cleaning up large contaminated sediment sites that require scientifically sound risk management, nationally consistent decisionmaking, consideration of short- and long-term risks, and consideration of societal and cultural impacts. Some ORD activities to meet this challenge include providing site-specific technical support, developing a framework for risk-based assessment of fish and wildlife exposed to persistent bioaccumulative toxicants, and developing a hybrid modeling/empirical approach for predicting accumulation factors in biota. The groundwater theme addresses the problem of complex site conditions (e.g., subsurface nonaqueous phase liquids, complex hydrogeology) and the long-term timeframe of remedying site conditions. The underlying problem that the multimedia theme attempts to address is that effective site characterization requires multimedia approaches for sample collection and analysis, as well as statistical analyses. Because regional site managers need technical advice and expertise, ORD has established technical support centers for customers in various areas.

The oil research program is small but is the most customer-oriented program. This research program is responsible for developing the test protocol for the management strategy of oil spills. A test protocol for the effectiveness and toxicity of dispersant products for oil spills has been developed through this research program. The underground storage tank research program utilizes alternative oxygenates to improve methods for remediating and containing subsurface contamination.

Determination of the nature and extent of materials streams, the risk associated with the materials, and appropriate dispositions for the waste or material stream drive the research under LTG 2. Under LTG 2, the resource conservation theme addresses the challenge that major risk management decisions for land-based sources of contamination require that exposures and risks be characterized for multiple media, pathways, and receptors. One science activity in this area is the development of a sophisticated model (i.e., 3MRA) capable of assessing the potential risks for multiple media, pathways, and receptors. Additional science activities to address resource conservation include sampling and risk screening guidance for e-wastes, developing exposure scenarios to support risk screening for beneficial reuse of other waste-derived products, and developing a national scale risk assessment for current and projected waste loading rates for selected priority chemicals. The underlying challenge of the materials management theme is that landfills will continue to be used as permanent containment for a high fraction of solid and hazardous waste and decisions have to be made on disposal or use of materials, including newer streams of electronics and nanomaterials. ORD science activities in this area include performing material performance and quality assurance testing of covers and liners and evaluating landfill bioreactors.

Additional areas of research associated with the Land MYP include risk assessment-related research, leveraging of National Center for Environmental Research (e.g., Science To Achieve Results [STAR] Grants Program, SBIR, Hazardous Substance Research Centers), and Brownfields research. Dr. Wentsel solicited questions from the Subcommittee members following the conclusion of his presentation.

Dr. Siegrist asked if, in terms of staff and mentoring, EPA develops its research plan with core competency in mind or if they recruit to build their expertise. Dr. Wentsel responded that the postdoctoral program is used to bring in scientists with new expertise. Dr. Dyer added that, although each EPA laboratory functions differently, he would focus on the National Health and Environmental Effects Research Laboratory (NHEERL) process. Following an independent peer review of divisional science programs within NHEERL, the current areas of expertise are noted, and additional needs are projected based on the MYP. Strategic hiring plans are utilized to fill science needs across the MYP, and postdoctoral fellows are hired to dovetail with established expertise. A participant asked how many postdoctoral fellows were employed. Dr. Dyer responded that of the approximately 50 postdoctoral fellows employed at ORD as full-time equivalents, 15 were assigned to NHEERL. Under cooperative agreements with the National Research Council and academic institutions, NHEERL is able to employ an additional 15 to 20 postdoctoral fellows. A participant responded that this was a relatively small number of postdoctoral fellows and asked about STAR grants. Dr. Wentsel responded that there was no official grant program for the Land Restoration and Preservation Research Program. Dr. Trish Erickson responded that there had never been any STAR grants under the Land Restoration and Preservation Research Program. Dr. Dyer added that legislation mandates basic research and the Superfund program through the National Institutes of Health manages the basic research grants. The legislation for the Land Restoration and Preservation Research Program is focused on more applied science.

Subcommittee Discussion
Dr. Charlie Menzie, Chair, Land Restoration and Preservation Research Subcommittee

Dr. Menzie asked the Subcommittee members if they had any questions for EPA personnel regarding their tasks.

Dr. Todd Bridges asked about the difference between customers, stakeholders, and clients. Dr. Wentsel responded that stakeholders, in this context, were people involved in the cleanup of a contaminated site, including regulatory personnel, federal agencies, and impacted citizens. Customers and clients are those for whom EPA develops services and products.

Dr. Haber commented that Goals 3 and 4 have a bit of overlap and asked if commenting on Goal 4 was appropriate. Dr. Wentsel responded that Subcommittee members could comment on the utilization of products for land purposes, even if they fall under human health.

Mr. Thompson mentioned that the previous MYPs contained very specific programs. Dr. Wentsel responded that the PIs available at the face-to-face meeting would not be commenting on specific research except in relation to the broader MYP. Dr. Dyer added that ongoing Land

research efforts are reflected in the posters to be presented at the face-to-face meeting, and the work described in the posters reflects multiple research programs.

Dr. Menzie stated that at this point the Subcommittee members should have read the MYP and background information and already had some discussion within their smaller workgroups. To prepare for the face-to-face meeting, he asked the Subcommittee members to put their initial thoughts with respect to the charge questions in writing; these initial thoughts would be shared with the entire Subcommittee early in the meeting. He expected that the Subcommittee would have a rough preliminary report ready before leaving the face-to-face meeting on Thursday. He informed Subcommittee members that if they had strong thoughts on a charge question to which they were not assigned, they should share their thoughts with the leader of that charge question's workgroup. He reminded the Subcommittee members to avoid sending e-mails to the entire Subcommittee and only send e-mails to himself or the workgroup leaders.

A participant asked about the approximate length of the final report. Dr. Menzie responded that he had been looking at previous BOSC Subcommittee reports and that these had about three to six pages per charge question. The report format included an introduction with the rest of the report designed around the charge questions. He encouraged Subcommittee members to view the reports on the BOSC Web Site as examples.

A participant asked if there would be onsite printing support at the face-to-face meeting. Ms. Drumm responded that printers will be available.

Dr. Menzie explained that Ms. Drumm divided up the poster assignments so that all of the posters could be viewed efficiently in the time allotted. Each poster was assigned a primary and secondary reviewer with consideration of the expertise of each reviewer. Following the poster session, each Subcommittee member will discuss his or her assigned posters in terms of the charge questions with the full Subcommittee. He stated that most of the posters were reproduced in a smaller version and were being sent to the Subcommittee members for their review before the face-to-face meeting. He directed the Subcommittee members to look at the material and consider how the information will help answer specific charge questions.

Dr. Menzie explained that there would be several working sessions during the face-to-face meeting. The 1-hour working session on Tuesday, December 13, 2005, will be an opportunity for the Subcommittee to take stock of its progress thus far and determine how to proceed with the discussions. The 2-hour working session after the presentations on Wednesday, December 14, 2005, will be an opportunity to discuss and synthesize all of the information the Subcommittee had received in presentations over the previous 2 days. The working session on Thursday, December 15, 2005, will be an extended writing time with the goal of having a general report-out to interested EPA staff and members of the general public at 2:30 p.m.

Dr. Clark commented that, based on his past experiences, it may be somewhat rushed on Thursday afternoon, but Subcommittee members should ensure that any problems and suggestions for improvements are communicated at this time.

Dr. Keating asked if the working groups were able to meet in private or if those meetings needed to be open to the public. Dr. Menzie emphasized that, outside of the working sessions where the DFO and the notetaker are present, members needed to focus their discussions within the workgroups and not have sidebar discussions. Ms. Drumm commented that she had reserved breakout rooms in which the smaller workgroups could meet to discuss their charge questions.

Dr. Menzie asked if all of the informational needs of the Subcommittee members had been satisfied or if any of the members had procedural questions for Ms. Drumm. Dr. Keating stated that he would like quality assurance metrics to be provided. Mr. Thompson commented that the SAB needed three to four conference calls following the face-to-face meeting and one teleconference for this Subcommittee might be unrealistic.

Public Comment

Dr. Menzie offered members of the public the opportunity to comment. No members of the public were present for comment.

Dr. Menzie adjourned the conference call at 2:00 p.m.

Action Items

- ✧ Subcommittee members will prepare, in writing, their thoughts with respect to the charge questions so that these may be shared with the entire Subcommittee at the face-to-face meeting.

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APPENDIX A

Teleconference Agenda
December 9, 2005
12:00 p.m.–2:00 p.m., EST

U.S. EPA BOARD OF SCIENTIFIC COUNSELORS
Land Restoration and Preservation Subcommittee

MEETING AGENDA
December 9, 2005
12:00 noon – 2:00 p.m., EST

CONFERENCE CALL
Participation by Teleconference Only
866-299-3188
code: 2025648239#

Friday, December 9, 2005

12:00 PM	Welcome - Summary of Ongoing Activities - Agenda for This Conference Call	Dr. Charlie Menzie Chair, Land Subcommittee
12:10 PM	Administrative Procedures - Logistics for Face-to-Face Meeting	Heather Drumm, EPA, DFO, Land Subcommittee
12:15 PM	Land MYP Overview	Dr. Randy Wentsel, EPA, National Program Director, and Dr. Leah Evison, EPA, OSWER
1:05 PM	Subcommittee Discussion - Preparation for Face-to-Face Meeting - Poster Session Breakout Groups - Development of Draft Report Outline	Land Subcommittee
1:50 PM	Public Comments (If Needed)	
2:00 PM	Adjourn	